

BORSE

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File



PORT OF PORTLAND

October 26, 2001

Mr. Rodney Struck
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201

**Subject: Marine Terminal 1 South
Response to Review Comments on Work Plan Addendum No. 2
for Groundwater Monitoring
ECSI File No. 2042**

Dear Mr. Struck:

The Port of Portland (Port) has prepared the following response to the Oregon Department of Environmental Quality (DEQ) review comments on the Marine Terminal 1 (T1) South the Work Plan Addendum No. 2 for Groundwater Monitoring. The Port's response to DEQ's specific comments (in italics) are summarized below.

DEQ Specific Comments

Comment 1: *Section 3.1. Borings for monitoring well installation should be sampled and logged in accordance with Section 3.2 of the Sampling and Analyses Plan.*

Response: All monitoring well borings were sampled and logged per the Work Plan for Supplemental Site Characterization, Marine Terminal 1 South, dated August 31, 2000.

Comment 2: *Section 3.1. The work plan does not specify soil samples will be collected or submitted for analytical testing from the proposed monitoring well borings. Prior to implementing the field investigation, the Port should assess if soil conditions are adequately characterized in the vicinity of the proposed borings or if additional soil samples should be collected for characterization or risk assessment purposes. If visual, olfactory, or other evidence of contamination is noted during drilling, soil samples should be collected and submitted for analytical testing.*

Response: Soil samples were collected from monitoring well borings between 2.5 to 5.0 foot intervals and screened by visual (color and sheen), olfactory, and headspace vapor methods. If evidence of contamination was noted during field screening, soil samples were collected for analysis. Analysis was selected based on sample depth, field screening results, and in consultation with DEQ.

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Comment 3: Section 3.1.1. Page 3. *The work plan states that monitor MW-6 will be used to evaluate background water quality. In order to demonstrate that this well is representative of background water quality conditions, selected soil samples should be collected from this boring to demonstrate soil in this area is not impacted by site contaminants.*

Response: Soil samples were collected from the monitoring well MW-6 boring as per Comment 2. One near-surface soil sample [0 to 3 feet below ground surface (bgs)] was analyzed for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and thirteen priority pollutant metals, for the purpose of baseline assessment.

Comment 4: Section 3.1.2. *The proposed well screen interval of 22-32 feet below ground surface (bgs) does not allow for much increase above the water levels observed during the relatively dry/low water conditions observed during the remedial investigation. DEQ recommends that the proposed wells be completed with 15-foot well screens installed from approximately 17 to 32 feet bgs.*

Response: The T1 South groundwater monitoring wells were completed with 15-foot well screens.

Comment 5: Section 3.1.2. Page 3. *DEQ recommends that the groundwater monitoring well development criteria identified in the Sampling and Analyses Plan (Hahn, 2000) should be revised. Specifically, well development/purging should continue until water quality parameters stabilize, as defined below:*

- pH: +/- 0.1 unit
- Temperature: +/- 1° C
- Specific Conductivity: +/- 10%
- Turbidity Goal: 5 NTU
- Dissolved Oxygen: 10%
- Redox Potential: 10%

Response: The water quality parameters and levels listed above were monitored for during well development of the T1 South groundwater monitoring wells.

Comment 6: Section 3.3, Page 3; and Table 1. *DEQ requests that additional analyses be performed during the first groundwater sampling event. Specifically, the following analyses should be added to the first groundwater sampling event:*

- Total petroleum hydrocarbons (TPH) using NW Method TPH-Dx;
- Volatile organic compounds;
- Additional metals (cadmium, chromium, mercury, nickel, zinc, and silver).

Response: As discussed with DEQ previously, the Work Plan Addendum No. 2 will include additional laboratory analyses for TPH, VOCs, and 13 total priority pollutant metals of groundwater samples from MW-1 and MW-4 during the first monitoring event. The attached Table 1 presents an updated groundwater monitoring plan. Following evaluation of the groundwater sampling results of the first monitoring event, the sampling and analysis plan may be adjusted in consultation with the DEQ.

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Comment 7: *Section 3.3, Page 3, and Table 1. Analytical detection limits should be reviewed prior to implementing the field investigation to ensure that the anticipated laboratory detection limits are equal to or less than anticipated project screening goals (e.g., risk-based concentrations, ecological benchmark values).*

Response: Soil and groundwater analysis will meet the lowest practicable industry standard method detection limit. There will be circumstances where detection limits are above screening goals or ecological benchmark values due to industry standard method capabilities. In such circumstances, this data will have to be evaluated based on qualitative means.

Comment 8: *Section 3.3. The schedule for the second monitoring event should be defined. The second event should represent anticipated high water level conditions.*

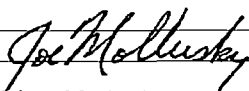
Response: The second groundwater sampling event is tentatively scheduled for January 2002; however the final date will be determined based on Willamette River levels and in consultation with the DEQ.

Comment 9: *Figure 3. DEQ recommends that monitoring wells MW-4 and MW-5 be moved closer (i.e., south) towards the potential source areas.*

Response: As discussed with DEQ previously, the location of MW-5 was not adjusted since this well serves the purpose of evaluating the groundwater to surface water pathway. The location of MW-4 was moved approximately 10 to 20 feet southwest towards the B-37 (dry well) source area.

The Port will submit the T1 South groundwater monitoring results from the September 2001 sampling event to DEQ when received from the analytical laboratory. Please contact me at (503) 944-7533 with any questions.

Sincerely,



Joe Mollusky
Environmental Projects Manager
Properties and Development Services

Attachment

cc: Bill Bach, Port
Jeff Bachrach, Ramis Crew Corrigan & Bachrach
Taku Fuji, Hart Crowser
Nancy Murray, Port
Tim Ralston, Ralston Investments
Guy Tanz, Hahn and Associates, Inc.

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TABLE 1
Updated Groundwater Monitoring Plan

Work Plan Addendum No. 2 for Groundwater Monitoring
Marine Terminal 1 South
2100 NW Front Avenue
Portland, Oregon

HAI Project No. 5106

| Event ==> | 1st | | | | | | | 2nd | | | | | | |
|----------------------------|-------|---------------------|----------|------|--------------------------------|------------------------------|-------|-------|---------------------|----------|------|--------------------------------|------------------------------|-------|
| EPA Method ==> | 8260B | TPH-Dx ³ | 8270 SIM | 8270 | 6010 | | 160.1 | 8260B | TPH-Dx ³ | 8270 SIM | 8270 | 6010 | | 160.1 |
| Analyte ==> | VOCs | Diesel and Oil | PAHs | DEHP | Unfiltered Metals ¹ | Filtered Metals ¹ | TSS | VOCs | Diesel and Oil | PAHs | DEHP | Unfiltered Metals ¹ | Filtered Metals ¹ | TSS |
| MW-1 | X | X | X | X | X ² | X | X | - | - | X | TBD | X | X | X |
| MW-2 | - | - | X | X | X | X | X | - | - | X | TBD | X | X | X |
| MW-3 | - | - | X | - | X | X | X | TBD | TBD | X | - | X | X | X |
| MW-4 | X | X | X | - | X ² | X | X | - | - | X | - | X | X | X |
| MW-5 | - | - | X | - | X | X | X | TBD | TBD | X | - | X | X | X |
| MW-6 | - | - | X | X | X | X | X | - | - | TBD | TBD | TBD | TBD | TBD |
| MW-7 | - | - | X | X | X | X | X | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| Duplicate | X | X | X | X | X | X | X | TBD | TBD | X | TBD | X | X | X |
| Equipment Blank | X | - | - | X | - | - | - | TBD | - | - | TBD | - | - | - |
| Total Possible Samples ==> | 4 | 3 | 8 | 6 | 8 | 8 | 8 | 5 | 4 | 8 | 6 | 8 | 8 | 8 |

NOTE:

1 = arsenic, copper, lead
2 = cadmium, chromium, mercury, nickel, zinc and silver
3 = by Northwest method
X = Collect and analyze for indicated analyte
DEHP = bis(2-ethylhexyl)phthalate
EPA = U. S. Environmental Protection Agency
NW = northwest

PAHs = polynuclear aromatic hydrocarbons
TBD = to be determined
TPH = total petroleum hydrocarbons
TSS = total suspended solids
VOCs = volatile organic compounds

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bcc: David Ashton, Port
Trey Harbert, Port
Bob Teeter, Port

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